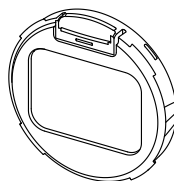


# Special Documentation

## VU101 Bluetooth® display

Remote operation via Bluetooth® wireless technology



# 1 About this document

## 1.1 Symbols



Tip

Indicates additional information.

## 1.2 Documentation

### 1.2.1 Designated use

Remote operation of devices via Bluetooth® wireless technology

#### **Suitable for the following device versions**

- Device: FMG50
- Firmware version: 01.00.zz or higher
- Device version: 1

#### **Incorrect use**

The manufacturer is not liable for damage caused by improper or non-designated use.

Under different operating conditions than those described here, protection may be compromised and the correct functioning of the device cannot be guaranteed.

### 1.2.2 Declaration of Conformity

The Bluetooth® display VU101 meets all the applicable EC Directives.

## 1.3 Registered trademarks

#### **Bluetooth®**

The *Bluetooth*® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Endress+Hauser is under license. Other trademarks and trade names are those of their respective owners.

#### **Apple®**

Apple, the Apple logo, iPhone, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc.

#### **Android®**

Android, Google Play and the Google Play logo are trademarks of Google Inc.

## 2 Radio approvals

### 2.1 Europe

This device meets the requirements of the Telecommunications Directive RED 2014/53/EU:

- EN 300 328 V2.1.1
- EN 301 489-1 V2.1.1
- EN 301 489-17 V3.1.1
- EN 62311: 2008

### 2.2 Canada and United States

#### 2.2.1 English

This device complies with Part 15 of the FCC Rules and with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.



Changes or modifications made to this equipment not expressly approved by Endress+Hauser SE+Co. KG may void the FCC authorization to operate this equipment.



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:


- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### 2.2.2 Français

Le présent appareil est conforme aux CNR d'industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes :

- L'appareil ne doit pas produire de brouillage, et
- L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

 Les changements ou modifications apportés à cet appareil non expressément approuvés par Endress+Hauser SE+Co. KG peuvent annuler l'autorisation FCC d'utiliser cet appareil.

## 2.3 Japan

Japanese Radio Law and Japanese Telecommunications Business Law Compliance.

This device is granted pursuant to the Japanese Radio Law (電波法) and the Japanese Telecommunications Business Law (電気通信事業法).

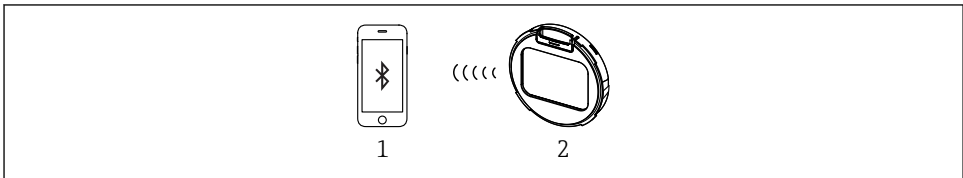
This device should not be modified (otherwise the granted designation number will become invalid).

## 2.4 Other countries

Other national approvals are available on request.

# 3 Operation options

## 3.1 Access via Bluetooth® wireless technology



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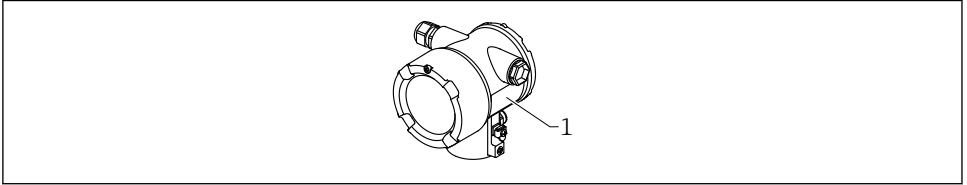
 1 Remote operation via Bluetooth® wireless technology

1 Smartphone or tablet with SmartBlue (app)

2 Display with optional Bluetooth function

## 3.2 Preparation

The serial number of the device serves as the initial password when the connection is established for the first time. The serial number can be found on the nameplate.



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1 Nameplate

## 3.3 Technical data

- Maximum free-field range 50 m (165 ft)
- Operation radius with intervisibility 10 m (33 ft) around the device
- Supply voltage: 3.2 V<sub>DC</sub> with max. 3.4 V<sub>DC</sub> and min. 3.1 V<sub>DC</sub>
- Power consumption: max. 17 mW
- Current consumption: 5 mA
- Pollution degree: 2
- Temperature range: -40 to +85 °C (-40 to +185 °F)
- Relative humidity: operation up to 100 % in the measuring devices  
Do not open in a condensing environment!
- Suitable for wet environments, integrated in measuring devices

### 3.3.1 Operating altitude

As per IEC 61010-1 Ed.3:

- Up to 3 000 m (9 800 ft) above sea level
- Can be extended to 5 000 m (16 400 ft) above sea level if overvoltage protection (OVP) is used

# 4 Commissioning

## 4.1 Requirements

### Device requirements

Commissioning via SmartBlue is only possible if a VU101 Bluetooth® display is installed.

## System requirements

SmartBlue is available as a download from the Google Play Store for Android devices and from the iTunes Store for iOS devices

- iOS devices: iPhone 4S or higher from iOS9.0; iPad2 or higher from iOS9.0; iPod Touch 5th generation or higher from iOS9.0
- Devices with Android: from Android 4.4 KitKat and *Bluetooth*® 4.0

## Initial password

- The serial number of the device (on the nameplate) serves as the initial password when the connection is established for the first time.
- If the main electronics module of the device is a replacement part, the serial number of the Bluetooth display is the initial password.

### Please note the following:

If the Bluetooth display is removed from one device and installed in another device.

- All the log-in data are only saved in the Bluetooth display and not in the device
- The password changed by the user is also saved in the Bluetooth display
- The Bluetooth and/or background lighting function can depend on the supply voltage to the device. For details on the supply voltage range, see the Operating Instructions.

## 4.2 SmartBlue app

1. Scan the QR code or enter "SmartBlue" in the search field of the App Store.



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 2 [Download link](#)

2. Start SmartBlue.
3. Select device from livelist displayed.
4. Enter the login data:
  - ↳ User name: admin
  - Password: serial number of the device
5. Tap the icons for more information.

 After logging in for the first time, change the password!





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[www.addresses.endress.com](http://www.addresses.endress.com)

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